

## CLAIMS

1. A method of automatically fabricating a suprastructure to be attached to an implant with the help of a digital model description of the shape, characterized by the following steps:
  - 5 • recording a real clinical situation or a shaped clinical situation of the implant (3; 13) as digital data,
  - analyzing this situation and determining the implant axis (5; 16),
  - computing the optimum shape of the suprastructure (1, 2), and
  - 10 • fabricating the individual elements from one or more blanks (11) on the basis of said digital data with the aid of machining equipment.
2. A method as defined in claim 1, characterized in that a mating surface between the digitized first element (1) of the suprastructure on the one hand and the digitized second element (2) of the suprastructure on the other hand, is determined.  
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3. A method as defined in claim 1 or claim 2, characterized in that the shape of that element of the suprastructure which is to be connected to the implant is described by at least two of the following parameters: the shoulder width, the tilt angle of the suprastructure relative to the longitudinal axis (5) of said implant (3), the angle of rotation of the suprastructure about the longitudinal axis (16) in said blank (11), and the height of said post.  
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- 25 4. A method as defined in any one of claims 1 to 3, characterized in that one element of the suprastructure is an abutment and that the shape of an abutment (2) is optimized with reference to one or more or all the following parameters:
  - a minimum value for the shoulder width;
  - a maximum height of the post delimited by the tilt angle of the suprastructure relative to the longitudinal axis (5) of said implant (3), the geometry of said blank (11), and the height of the occlusal sur-

- face (22), the maximum height of the post being such that it is disposed at a maximum distance below the height of the occlusal surface (22);
- a minimum height of the post delimited by the position of the head of an occlusal screw (14);
  - an angle of rotation of the abutment about the longitudinal axis in said blank (11), which is given by the relative position of said implant (3; 13) in the clinical situation.
- 5 10 15 20 25 30 5. A method as defined in any one of claims 1 to 4, characterized in that the shape of said blank (11) and the shape of the dental suprastructure (1, 2) are described in the coordinate system of the geometry (6; 14) for attachment to said implant (3; 13).
6. A method as defined in any one of claims 1 to 5, characterized in that determination of the axis of said implant (5; 16) is effected interactively by the user.
7. A method as defined in any one of claims 1 to 6, characterized in that one element of the suprastructure is an abutment and a further element of the suprastructure is a crown.
8. A method as defined in any one of claims 1 to 6, characterized in that one element of the suprastructure is an abutment and a further element of the suprastructure is a cap.
9. A method as defined in any one of claims 1 to 6, characterized in that one element of the suprastructure is an abutment and a further element of the suprastructure is a reduced crown.
10. A method as defined in any one of claims 1 to 6, characterized in that the suprastructure comprises three elements, and a first element of the suprastructure is an abutment and a second element of the suprastructure is a

partially veneered crown and the third element is a veneer, and that not only the mating surface between said first and second elements but also a mating surface between said third element and said first element and/or said second element is/are computed.

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11. A method as defined in any one of claims 1 to 6, characterized in that said suprastructure (1') comprises a number of abutments which are interconnected by a common frame construction.

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12. A method as defined in any one of claims 1 to 11, characterized in that the distribution rules can be varied by the user.

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13. A method as defined in any one of claims 1 to 12, characterized in that that element of the suprastructure which is connected to the implant is computed in its final size and that the further element of the suprastructure connected to this element is computed as a provisional suprastructure having exterior dimensions which are smaller than the final exterior dimensions while retaining the mating surface.

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14. A method as defined in claim 13, characterized in that the same data set is used to compute said element of the suprastructure with its final dimensions.